

# **Atascosa River TMDL Public Meeting**

Draft Meeting Summary – January 20, 2005

## **Attendees:**

**Pete Pawelek, Doyle Hawthorn, Gene Camargo, Brian Petri, Diana J. Bautista, Mr./Mrs. David Davidson, Domingo Palomo Jr., James Warnken, W.H. Hamilton, William O. Lamb, Michelle Woodke, Ruben Talamantez Jr., Jerry Davidson, Mike Sherman, Clifton Stacy, Gerald Black, Billy Shannon, Rocky Freund, Kevin Wagner, Stanley Coughran, Jim Lucas, David Smith, Jim James, Cary Cochran, William J. Shannon, LeeRoy Cumpian, David Alviso Jr., George Thompson, Darren Westfall, Dr. E.E. Byrom Jr., Linda Byrom, Kathy Coronado, Jim Marsh, Frances Marsh, Aaron Wenat, Fred F. Katesmorak, Carol Merchant, L.D. Hooge.**

**Also present was TCEQ - Project Manager Andrew Sullivan, and TCEQ contracted staff representing: Shoreline Environmental Research Facility (SERF) –Robert Wilkinson; Ecological Communications Corporation (EComm) – Victor Palma and Facilitator Jeremy Walther.**

## **CALL TO ORDER/WELCOME/INTRODUCTIONS:**

Victor Palma (EComm) opened the public meeting by explaining that the purpose of this meeting is to provide results from the data collected during the Atascosa River TMDL project, discuss how the data will be used, and to initiate the formation of a stakeholder group (steering committee). Introductions were made, handouts distributed, and the evenings' agenda was reviewed.

Jeremy Walther (EComm Facilitator) then stated that the purpose of the meeting was to inform the public and potential stakeholders of the status of work that was being performed under a Total Maximum Daily Load (TMDL) project for the Atascosa River as required under the 1972 federal Clean Water Act. The evening's meetings agenda included presentations on the TMDL program and process, history and development of the project, the next steps that will be taken regarding the project, the 305(b) and 303 (d) listing processes, the initial development of a formal stakeholder group, and an opportunity to provide input from the public on the project.

Public participation is very important and ensures that state government considers local perspectives in its decisions. The Atascosa River project will be a joint effort among the state and local stakeholders.

Basic ground rules were briefly reviewed for the informal meeting of the potential Atascosa River stakeholders. The following ground rules were established:

Everyone's ideas are important--share the time.

Stick to the topic. Tonight's agenda is Atascosa TMDL Project. If you have comments related to topics other than this project, please hold them until after the meeting.

Be candid but courteous.

Address all comments to the group at large.

## **PROGRAM OVERVIEW**

Mr. Andrew Sullivan, the TMDL Project Manager at the TCEQ, began the presentation by stressing the importance that involvement on the local level has on the success of the project. Mr. Sullivan asked for three facts from those in attendance that would help him learn something new about the Atascosa River. Attendees discussed how the reach of the watershed extends into Bexar County, that the river went dry during 1950s drought, and that parts of it are dry right now.

Mr. Sullivan introduced the TMDL process, and explained how surface water bodies in Texas, such as the Atascosa River, that are not meeting standards appear on an impaired waters list and are handled through the TMDL program. The program identifies potential problems in a water body and attempts to correct the problem, as required by the Federal Clean Water Act. If a water body is not meeting one or more of its beneficial uses, as defined in the Texas Surface Water Quality Standards (TSWQS), then it is considered impaired. Impaired waters are identified on the 303(d) list and the Texas Water Quality Inventory. Every two years, surface water bodies in the state are assessed and water quality problems are identified. Once a water body is determined to be impaired a TMDL can then be developed in two parts: first, a TMDL is established, which identifies how much of one pollutant a water body can hold and still meet water quality standards; the second part, implementation, involves the development of a plan to fix the water quality problem.

Criteria by which water quality is judged are both narrative (description of water quality) and numeric (actual numbers). There are four general categories of uses: aquatic life use; contact recreation; public water supply; and fish consumption and oyster water use. Mr. Sullivan explained that two of the Atascosa River's assigned uses, contact recreation and aquatic life use, are being studied for this project.

Water bodies are placed in one of five categories. Category One water bodies typically have the best water quality, while Category Five water bodies exhibit the poorest water quality. Atascosa River falls within Category Five. The best and most appropriate scientific methods are used to develop TMDLs for Category Five water bodies. One specific project may develop several TMDLs for a single water body in which several pollutants may be addressed. Not all projects result in a TMDL. In some cases standards may be changed, or additional data may be collected.

One benefit of the program is that the watershed is considered as a whole, instead of looking at single contributors to assess potential sources of adverse water quality. Both point and non-point sources are reviewed, as well as natural sources.

Draft Meeting Summary

Atascosa River Bacteria TMDL Project

January 20, 2005

A TMDL is a scientific model that quantifies pollutant load and allocates the allowable load to the sources in the watershed. The TMDL document is submitted to the U.S. Environmental Protection Agency (EPA). There are six elements to a TMDL: define the problem; address the water quality standard; identify potential sources; define linkage to sources and how they're getting to the water body; ensure that the results are realistic; and allocate pollutant loads.

Mr. Sullivan then discussed how local involvement helps the state improve the quality and quantity of the overall project. Local involvement helps develop consensus-based decisions, and encourages open dialogue throughout the entire process. Mr. Sullivan identified potential stakeholders as pollutant contributors, regulators, persons who can help implement the water quality improvement practices, and members of the general public who use the water body.

Mr. Sullivan identified two different methods of implementation: watershed restoration plans (WRPs), which may be considered preventative and are not tied to a regulatory TMDL; and implementation plans (IPs), which are considered remedial and based on TMDLs. Implementation may take years to correct the water quality issues. New and renewed permitted loads within the watershed must comply with the TMDL results.

Mr. Sullivan then concluded the program overview portion of the presentation and asked for any questions. One attendee asked if there was a connection with this project and any ground water issues in the region, and if the local ground water authority (Evergreen Underground Water Conservation District) would have any input in the Atascosa TMDL project. Mr. Sullivan responded that the EUWCD would have the opportunity to provide as much input as they wanted, but as of present, there appears to be no connection between the surface water quality problems and local ground water quality.

The same attendee questioned the source of high pollution, and Mr. Sullivan responded that sources have not been identified at this stage of the project. Mr. Sullivan explained that the project is in the evaluation phase, and the extent of the problem is being identified.

Another attendee asked when the water sampling for this project was initiated. Mr. Sullivan responded that sampling for this project began in August 2002.

Someone else wanted to know if information from other projects was available to them, and if it would be presented during tonight's meeting. Mr. Sullivan explained that the presentation only covered the Atascosa River, and that the reports for 10 other water bodies that are part of the project would be available on the website within four to six months. Mr. Walther offered to make copies of a list of contacts and the project website address available to all in attendance before the end of the meeting.

One attendee noted that stagnant water and varying flow rates may have an affect on results of water quality samples for the Atascosa River. Mr. Sullivan explained that

samples were taken multiple times over a three year period during ambient conditions to ensure that the samples represented average water quality in the water body.

Another attendee asked about the timing and location of sampling events. Mr. Sullivan explained that samples were taken at the same place each time, but at different times of the year.

Another attendee asked if there was a written protocol for the Atascosa River that is unique to the river. Mr. Sullivan stated that there was a written protocol, and that it was the same for all similar water bodies.

An attendee asked if there were any other pollutants in the river that the public would need to know about. Mr. Sullivan noted that bacteria was the only pollutant that was higher than standards, and that no other pollutant has been identified as causing problems in the Atascosa.

A question was presented regarding the goals of the TMDL. Mr. Sullivan explained that the final goal is to bring the water quality of the Atascosa River within standard levels for aquatic life use and contact recreation. Another attendee suggested that swimming in the Atascosa River (in response to the contact recreation use) has not been a common practice for several decades. Mr. Sullivan responded that the state rules require that all surface water in the state be meeting contact recreation uses. Mr. Wilkinson stated that although that contact recreation may not be common locally, water in the Atascosa does contribute to areas downstream that are used heavily for recreation, such as Choke Canyon and Lake Mathis.

## **PROJECT OVERVIEW**

Mr. Sullivan then continued by presenting the data that has been collected to present date. He explained that the aquatic life use for the Atascosa is “High” and that the indicator for this use is dissolved oxygen. There are two criteria for dissolved oxygen for this aquatic life use. 5mg/L (average criteria) must be met, as well as a minimum standard of 3mg/L. If levels drop below these standards, the aquatic life use is not being met. For contact recreation, the indicator is bacteria concentration, specifically of E. coli. There are two criteria for this as well: single sample of 394 colonies per 100 mL; and geometric mean of 126 colonies per 100 mL.

He explained the improvements that have been made to monitoring technologies and methods since the segment was listed in 1999. Mr. Sullivan briefly explained the four possible outcomes now that the monitoring plan had reached its final stages: the removal of the Atascosa from the 303(d) list; a TMDL; change the standards for aquatic life use; and further data collection.

Mr. Sullivan outlined the monitoring plan, which included data collection for field, chemical, and biological parameters. He identified the three stations that were sampled on a map, all within the Pleasanton area. Chemical and field parameters were sampled at

least ten times. Biological parameters were sampled three times. He then presented a summary of the results.

#### *Dissolved Oxygen*

The uppermost site (17898) exceeded dissolved oxygen criteria 4% of time (both average and minimum criteria). This indicates that there doesn't appear to be much of a problem at the most upstream site. At the next downstream site (17900), located in Pleasanton, minimum criteria were never exceeded, while average criteria was exceeded 17% of the time. The next downstream site (17899) had zero exceedences below the minimum criteria, but exceeded average criteria 27% of the time. The furthest downstream site (12980) found no exceedences across all samples.

#### *Bacteria*

At the uppermost site (17898), the single sample criteria was exceeded 8% of the time. The geometric mean criteria was 93 (meeting standard). Anything above 126 would be considered exceeding that standard. At site 17900, single sample criteria was exceeded 47% of the time, while geometric mean criteria was 327 (more than double standard). At site 17899, single sample criteria was exceeded 43% of the time, while geometric mean was 365. For site 12980, single sample criteria was exceeded 58% of the time, while geometric mean was 409.

#### *Biology*

Across all sites, fish aquatic life use was below the standard of "High" 44% of the time. 56% of the time, life use equaled the standard. Aquatic life use was never higher than the established standard. Seventy-eight percent of the time, benthic macroinvertebrates were below the High aquatic life use. 22% of the samples were at standard. None of the samples were above standard. For habitat, 100% of the samples were below the established standard of High.

Mr. Sullivan then reviewed the four possible measures that could be taken now that results have been presented. Of the four possible outcomes for the aquatic life use, a standards change would be one possibility. The data clearly showed that removing it from the impaired waters list is not a possibility. It is decided that there is not enough data to justify going to a TMDL, and additional dissolved oxygen data will be collected to determine if the problem can be fixed with a TMDL or other corrective method.

For the contact recreation use, removal from the 303(d) list was ruled out as a possibility, since aquatic life use was shown to be less than standards. Further data collection was also negated as a possibility, as data from this project and GBRA collections provide more than enough to make a decision. Therefore, a TMDL will be developed for bacteria. Although an adjustment to the high aquatic life use is a possibility, this is not the case for contact recreation since there are no levels for contact recreation, and standards cannot be changed for the contact recreation impairment. Therefore, there is no alternative to the development of a TMDL for contact recreation.

Mr. Sullivan then opened the floor for questions. One attendee asked when the last time data was collected. Mr. Wilkinson responded that the last sampling event took place in August 2004. The attendee then noted that the watershed has had more precipitation recently than any similar time period in the last five years.

Another attendee asked if all samples were 24-hour samples. Mr. Sullivan and Mr. Wilkinson responded that all included samples were measured over a 24-hour period, taken every 15 minutes with a Hydrolab.

Another attendee stated that it may have benefited the project to include a sampling point above Pleasanton, since it is the largest municipality in the watershed. Mr. Sullivan responded that samples will be taken above Pleasanton during the next phase of the study for bacteria. Because flow is intermittent above Pleasanton, sampling would not have been feasible during low flow conditions.

Rocky Fruend of the Nueces River Authority noted that Region 16 attempted to establish a routine monitoring station (independent of this project) above Pleasanton, but was forced to abandon because of several periods of now flow.

One attendee noted that historically the flow of the Atascosa was maintained largely by underground water that surfaced at the headwaters of the river. Over time, as more wells were drilled, flow has decreased.

An attendee asked if any sites were located above the effluent of the City of Pleasanton sewage treatment plant. Mr. Sullivan stated that the most upstream site was located above the plant.

Another attendee noted that Poteet's sewage treatment plant, as well as other smaller municipalities contribute treated sewage flow above Pleasanton. Mr. Sullivan stated that the entire watershed is being studied, and that no single individual contributor is considered responsible. More discussion among several attendees and Mr. Sullivan noted that water upstream of Pleasanton flows underground, and that underground bacteria levels should be included as part of this study. Any pollutant put onto sandy areas upstream eventually are absorbed underground and then seep out in creek beds and eventually end up in the Pleasanton.

One attendee noted that the Atascosa River is very different from the other rivers as part of this study because it has a silty sandy bottom, whereas other water bodies have rocky bottoms. The silty conditions may contribute to the problems. Mr. Sullivan stated that comparisons of water bodies were not made, but that individual watersheds were studied to identify discreet problems, and substrate types will definitely be factored in.

An attendee asked what type of authority the TCEQ would have over a point source contributor if one is identified as a result of this study. Mr. Sullivan answered that point sources could be controlled through permitting, as well as requiring permitted contributors to take part in implementation plans.

Another attendee asked if there was a trigger for when samples were to take place. Mr. Sullivan responded that samples were conducted according to a sampling schedule to ensure that samples were taken during ambient conditions. Flow would be a variable in a model used for the development of a TMDL.

Mr. Walther then called for a five-minute break, and stated that additional questions will be taken after the break.

After the break, Rocky Fruend of the NRA announced that her agency will be conducting steering committee meetings in Uvalde on Feb. 17, and Corpus Christi on Feb. 22. She extended an invitation to all present to attend the meetings, which will cover not one specific watershed, but the region as a whole.

Robert Wilkinson of SERF then outlined the two components of the study that will be carried out this year. The first is event-based monitoring, which will be carried out within the next several months, and will support the modeling activity. Monitoring will be conducted during storm events ( $>1''$ ), across three spatially distributed sites within the watershed. Three separate events are budgeted for the current fiscal year. Based on historical data, this will most likely consist of a four-day sampling event with chemical and physical samples taken every 8 hours, 24-hours a day. Data collection for bacterial source tracking will be initiated to identify the type of bacteria found in the river, and instantaneous flow will be taken with a downward looking acoustic Doppler current profiler (ADCP). Bacterial source tracking will include DNA analysis to identify the sources of the bacterial indicators within the Atascosa.

One attendee asked when this activity would start. Mr. Wilkinson responded that the gear and crew is ready to go during the next storm event.

Mr. Sullivan summarized how data collected from event-based and impairment verification monitoring will be used in models to develop a TMDL. He outlined the differences between mechanistic models and empirical models. Both types of models only simplify the reality of stream conditions, and provide a prediction of what will happen under certain load inputs. Model parameters such as amount and types of algae, various elements, compounds, and nutrients, dissolved oxygen, bacteria levels, flow, load, etc. will be considered in these models.

One attendee asked for examples about how permits could be affected as a result of efforts to comply with standards. Mr. Sullivan stated that it depends on the source. If it is determined that point sources are the main contributors, then municipality-held permits, for example, could be affected. New discharges would find increased difficulties in obtaining permits. With respect to management measures, non-point sources may be controlled through construction to prevent pollutants from entering the river. Stakeholders will be affected on several levels depending on their activity within the watershed.

Another attendee asked what could be done about sources such as feed lots to prevent more pollution. Mr. Sullivan suggested that structural components could be used. The attendee suggested that any permits obtained by such operations could be revoked. Mr. Sullivan expressed hope that in those situations, it would not come to that, and permit holders and the TCEQ would cooperate to prevent their permits from being revoked. The attendee asked if there are any problems with chemicals in the Atascosa. Mr. Sullivan said that as far as is known, there are currently only problems with low dissolved oxygen and high bacteria levels.

Another attendee asked what could be done to increase dissolved oxygen levels. Mr. Sullivan stated that nutrient levels would have to be controlled, such as fertilizer application.

One attendee asked if a specific complaint was received that triggered the current study. Mr. Sullivan responded that some complaints are received for other bodies, and the state tries to respond to those, but the main driving factor for the Atascosa River was the water quality assessment that is carried out every two years. No specific complaint was received for the Atascosa River. Mr. Palma noted that the Atascosa River was not the only segment to be listed and that several other water bodies in the state are listed as impaired as a result of routine monitoring.

An attendee asked what the dissolved oxygen levels were for sites in the Atascosa downstream of flow contributed by wells from the Carrizo Aquifer. Mr. Sullivan stated that the site near Whitsett found no exceedences of dissolved oxygen of the minimum criteria.

Jeremy Walther distributed draft ground rules for the steering committee (stakeholder group) in order to initiate the formation of a stakeholder group. Comments on the ground rules may be made and a final version will be created. Once a final draft is approved, all individuals interested in becoming stakeholders will be contacted, and a steering committee will be formalized.

Potential stakeholders will be kept informed, data will be available through the TCEQ web site, and another meeting will be held to discuss the results of the monitoring data.

The next meeting will finalize the stakeholder group, and data from event-based monitoring will be presented.